

L20 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:182753 CAPLUS
DN 140:201451
TI Cobalt-substituted chromium oxide compositions, their preparation, and their use as catalysts and catalyst precursors
IN Nappa, Mario J.; Rao, Vellyur Nott Mallikarjuna; Rosenfeld, David H.; Subramoney, Shekhar; Subramanian, Munirpallam A.; Sievert, Allen C.
PA E.I. du Pont de Nemours and Company, USA
SO PCT Int. Appl., 68 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004018093	A2	20040304	WO 2003-US26326	20030821
	WO 2004018093	A3	20040422		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2002-405220P P 20020822

AB A crystalline α -chromium oxide where 0.05-6 atom% of the chromium atoms in the α -chromium oxide lattice are replaced by trivalent cobalt (Co³⁺) atoms is disclosed. Also disclosed is a chromium-containing catalyst composition comprising as a chromium-containing component the crystalline cobalt-substituted α -chromium oxide; and a method for preparing a composition comprising the crystalline cobalt-substituted α -chromium oxide. The method involves (a) co-precipitating a solid by adding ammonium hydroxide

to an aqueous solution of a soluble cobalt salt and a soluble trivalent chromium salt that contains ≥ 3 mol of nitrate/mol of chromium in the solution and has a cobalt concentration 0.05-6 mol% of the total concentration of cobalt and chromium in the solution; and after at least three moles of ammonium per mol of chromium in the solution has been added to the solution, (b) collecting the co-precipitated

solid formed in (a); (c) drying the collected solid; and (d) calcining the dried solid. Also disclosed is a chromium-containing catalyst composition comprising a chromium-containing component prepared by treating the crystalline cobalt-substituted α -chromium oxide with a fluorinating agent; and a process for changing the fluorine distribution (i.e., content and/or arrangement) in a hydrocarbon or halogenated hydrocarbon in the presence of a catalyst. The process involves using as the catalyst a composition comprising the crystalline cobalt-substituted α -chromium oxide and/or the treated cobalt-substituted α -chromium oxide.

L20 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:42330 CAPLUS
DN 130:112046
TI Gas chromatographic retention parameters database for refrigerant mixture composition management
AU Bruno, Thomas J.; Bachmeyer, Gregory M.; Wertz, Kelly H.
CS Physical and Chemical Properties Division, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, Boulder, CO, 80303, USA

SO International Journal of Refrigeration (1998), 21(8), 639-647
CODEN: IJRFDI; ISSN: 0140-7007
PB Elsevier Science Ltd.
DT Journal
LA English
AB Composition management of mixed refrigerant systems is a challenging problem in the laboratory, manufacturing facilities, and large refrigeration machinery.

The issue of composition management is especially critical for the maintenance of machinery

that utilizes zeotropic mixts. as working fluids. These are fluids in which the gas and liquid phases will generally have greatly different compns. While there are many anal. techniques available for laboratory and online analyses, gas chromatog. probably offers the greatest flexibility at the most reasonable cost. This paper describes a chromatog. database that provides for the identification of refrigerant components, and thereby facilitates composition management of zeotropic fluids. Prior to the description of the database a description is given of the basic theory of chromatog. retention parameters and the exptl. techniques used in their measurement.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:148274 CAPLUS
DN 124:249231
TI Kovats Retention Indexes of Halocarbons on a Hexafluoropropylene Epoxide-Modified Graphitized Carbon Black
AU Bruno, Thomas J.; Wertz, Kelly H.; Caciari, Michael
CS Thermophysics Division, National Institute of Standards and Technology, Boulder, CO, 80303, USA
SO Analytical Chemistry (1996), 68(8), 1347-59
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB Kovats retention indexes of 97 halocarbons related to research on alternative refrigerants, propellants, foaming agents, and blowing agents were measured on a packed column stationary phase consisting of a 5% (mass/mass) coating of a low mol. weight polymer of hexafluoropropylene epoxide on graphitized carbon black. The measurements on each fluid were made at four temps., and the thermal dependence of the indexes was modeled with appropriate equations. The modeled values are suitable for the identification of these compds. by gas chromatog. on both laboratory and field instrumentation. The values are also useful for the optimization of more sophisticated analyses needed in specific situations. The stationary phase chosen will provide separation of nearly all the fluids of interest. Also, there is sufficient spread in the retention index values to facilitate fluid identification. The measurements also appear to fit a qual. triangular property diagram that was useful for classifying alternative refrigerant fluids and related compds.

L20 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:739446 CAPLUS
DN 123:305689
TI Retention of halocarbons on a hexafluoropropylene epoxide-modified graphitized carbon black. IV. Propane-based compounds
AU Bruno, Thomas J.; Wertz, Kelly H.; Caciari, Michael
CS Thermophysics Division, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, Boulder, CO, 80303, USA
SO Journal of Chromatography, A (1995), 708(2), 293-302
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier
DT Journal

LA English

AB The retention characteristics of 25 propane-based bromofluorocarbon, chlorocarbon, chlorofluorocarbon, and fluorocarbon fluids were studied as a function of temperature on a stationary phase consisting of a 5% (m/m) coating

of a low-mol.-mass polymer of hexafluoropropylene epoxide on a graphitized carbon black adsorbent. Measurements were performed at 0, 20, 40 and 60° for R-245ca and R-245cb. Measurements were performed at 20, 40, 60 and 80° for R-227ca, R-227ea, R-236ea, R-236fa, R-245fa, and R-263fb. Measurements were performed at 40, 60, 80 and 100° for R-217ba, R-254cb and R-1243b, and at 60, 80, 100 and 120° for R-280da and R-217caB1. Measurements were performed at 80, 100, 120 and 140° for R-215aa, R-216ba, R-253fb, R-262da, and R-270aa. Measurements were performed at 100, 120, 140 and 160° for R-215ba, R-225ca, R-225cb, R-243db, R-270da, R-270fa, and R-270fb. Relative retentions as a function of temperature were calculated with respect to the retentions of tetrafluoromethane (R-14) and hexafluoroethane (R-116). Qual. features of the data are examined, and trends are identified. The relative retention data were fitted to linear models for the purpose of predicting retention behavior of these compds. to facilitate chromatog. anal.

(FILE 'HOME' ENTERED AT 14:33:38 ON 06 DEC 2004)

FILE 'REGISTRY' ENTERED AT 14:34:17 ON 06 DEC 2004

L1 1 S 1,1,1,2,3,3,3-HEPTAFLUOROPROpane/CN
L2 1 S 1,1,1,2,2,3,3-HEPTAFLUOROPROpane/CN
L3 1 S L2
L4 4 S C3CLF7/MF
L5 1 S 76-18-6/RN
L6 1 S 422-86-6/RN

FILE 'CAPLUS, USPATFULL, CA, CAOLD' ENTERED AT 14:40:35 ON 06 DEC 2004

L7 2089 S L1
L8 472 S L2
L9 204 S L7 AND L8
L10 163 S L5
L11 132 S L6
L12 14 S L9 AND L10
L13 6 S L9 AND L11
L14 7 DUP REM L12 (7 DUPLICATES REMOVED)
L15 3 DUP REM L13 (3 DUPLICATES REMOVED)
L16 1 S L14 AND DISTILL?
L17 1 S L15 AND DISTILL?
L18 0 S L17 NOT L16
L19 2 S L15 NOT L17
L20 4 S L14 NOT L15